

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Service Rules for the 698-746, 747-762)	WT Docket No. 06-150, et al.
and 777-792 MHz Bands)	

COMMENTS OF SPRINT NEXTEL CORPORATION

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EXECUTIVE SUMMARY

The Commission should modify the existing 700 MHz rules in three ways. First, the Commission should replace the single twenty megahertz block with two ten-megahertz blocks. Smaller block sizes in the 700 MHz band will create more opportunities for new entrants, allow established carriers greater flexibility in supplementing their deployed systems, and afford small and rural businesses greater access to spectrum. Second, the Commission should adopt geographic licensing areas using cellular market areas (CMAs) in the two new ten-megahertz blocks in the Upper 700 MHz Band. Smaller geographic licensing areas in the 700 MHz band will encourage broadband deployment, competition, and innovation. Third, the Commission should definitively resolve the statutory impediments to public-private partnerships in the 700 MHz public safety spectrum. Confronting the statutory and jurisdictional limitations on public-private partnerships will provide the stable legal foundation necessary to construct a nationwide, interoperable broadband network for public safety licensees. Making these changes will help the public realize the tremendous promise of the 700 MHz spectrum.

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I. INTRODUCTION

Finalizing the service rules for 700 MHz band poses one of the Commission's greatest challenges in years. Done well, the 700 MHz service rules will provide valuable opportunities for new entrants and existing mobile wireless service providers to offer new services. Done poorly, the 700 MHz service rules could lock-in the dominance of the nation's two dominant incumbent local exchange carriers and diminish the opportunities for wireless broadband competition nationwide.

To ensure the best and most intensive use of this important national resource, the Commission should modify the existing 700 MHz band plan in three ways. First, the Commission should replace the single twenty megahertz block with two ten-megahertz blocks. Smaller block sizes will create more opportunities for new entrants, allow established carriers greater flexibility in supplementing their deployed systems, and afford small and rural businesses greater flexibility in obtaining 700 MHz spectrum. Second, the Commission should adopt geographic licensing areas using cellular market areas (CMAs) in the two new ten-megahertz blocks in the Upper 700 MHz Band. Smaller geographic licensing areas in the 700 MHz band will encourage broadband deployment, competition, and innovation. Third, the Commission should resolve outstanding questions about the legality of commercial spectrum leasing in the 700 MHz public safety spectrum. While not insurmountable, the statutory limitations on commercial leasing and use of public safety spectrum require closer scrutiny. Making these

changes and exploring the statutory challenges more comprehensively will help the public realize the tremendous promise of the 700 MHz spectrum and provide the stable regulatory foundation needed for intense investment in the band.

II. DISAGGREGATING THE TWENTY MEGAHERTZ BLOCK IN THE UPPER 700 MHZ BAND WILL PROMOTE BROADBAND DEPLOYMENT AND ALLOW NON-ILEC COMPETITORS ACCESS TO VITAL BROADBAND RESOURCES.

The Commission can increase access to spectrum and spur the competitive deployment of broadband wireless technologies by establishing smaller spectrum block sizes in the Upper 700 MHz band. The Commission should reconfigure the oversized D Block, which is currently a paired 20-megahertz block (2 x 10 MHz), into two more readily accessible, ten-megahertz spectrum blocks. To satisfy the Commission's objective of promoting greater access to 700 MHz spectrum, two paired ten-megahertz (2 x 5 MHz) commercial license blocks in the 700 MHz band affords greater opportunities and benefits than a single paired 20 megahertz or wider spectrum block. As the industry widely recognizes, spectrum in the 700 MHz band possesses excellent propagation characteristics that make this spectrum attractive for broadband communications. The Commission should promote widespread participation in the 700 MHz auction by assuring that competitors – including smaller, rural, regional carriers, and entities not affiliated with the two large incumbent local exchange carriers – have an opportunity to bid for 700 MHz spectrum to provide wireless communications services. .

First, a paired, ten-megahertz block offers enormous broadband opportunities. Each of the two, ten megahertz blocks would provide sufficient capacity for three CDMA EVDO channels or two five-megahertz WiMAX TDD channels. These technologies have the ability to provide broadband service to users with data rates well in excess of 1 Mbps.¹ In its comments in

¹ Sprint Nextel EV-DO Rev.A users in many markets typically achieve download speeds of 600 kbps to 1.4 Mbps, and upload speeds of 350-550 kbps. *See, e.g.,* Sprint Nextel News Release, *Buckeyes Can Do More with Wireless, Faster Sprint Mobile Broadband in Columbus*, April 26, 2007. The WiMAX Forum

response to the Commission's proceeding on the 700 MHz public safety allocation, AT&T asserted that that ten megahertz is "more than sufficient" to create a national public safety broadband network.² AT&T states that "[s]ome present-day technologies require as little as 1.25 megahertz to provide broadband service. Ten megahertz will allow carriers to satisfy consumer demands for a comprehensive array of high speed, broadband voice and data applications."³

Second, creating two paired ten-megahertz blocks in the 700 MHz band promotes the Commission's objective of increasing competition among wireless broadband service providers. Consistent with the Commission's approach of "enhanc[ing] access to . . . spectrum by a variety of potential licensees,"⁴ smaller block sizes would create greater opportunities for new entrants in the 700 MHz band and increase the likelihood of broad-based participation in the auction. Rather than being forced to acquire greater spectrum blocks than necessary to accommodate their business plans, carriers can acquire only the spectrum they need -- whether to enter the market for the first time or to supplement their existing spectrum holdings. Retaining a 20-megahertz or larger spectrum block in the 700 MHz band will disadvantage participants with fewer resources as well as those who are willing to pay more for strategically important spectrum assets smaller than twenty megahertz. Reservation of such a large portion of the band in a single license could prevent them from being able to participate in the bidding or force them to acquire more bandwidth than they need to deploy wireless broadband services.

Proponents of the 700 MHz Balanced Consensus Spectrum Band Plan ("Balanced

expects significantly higher net data rates from mobile WiMAX. See "Mobile WiMAX – Part II, A Comparative Analysis," May 2006.

² Comments of AT&T Inc, PS Docket No. 06-229, at 10-11 (filed Feb. 26, 2007) (AT&T Public Safety Comments).

³ *Id.* at 10.

⁴ *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, Report and Order and Further Notice of Proposed Rulemaking*, FCC 07-72, WT Docket No. 06-150 *et al.*, ¶ 42 (2007) (*700 MHz R&O and Further Notice*).

Consensus Plan”), which includes regional, rural and smaller carriers such as Alltel Corporation, Dobson Communications Corporation, and Leap Wireless International, Inc., have filed comments in the record stating that, “If the Commission fails to subdivide the 20 MHz upper 700 MHz band frequency block, and fails to license it on a smaller than REAG basis, proponents of the Balanced Consensus Plan will be relegated to seeking spectrum only in the lower band.”⁵ Similarly, Cellular South Licenses, Inc. asks the Commission to subdivide the 20 MHz spectrum block as part of creating a 700 MHz band plan that will afford “small carriers and new market entrants . . . a realistic opportunity to participate because these are the companies who are most likely to build out and serve rural areas.”⁶ In addition, established carriers seeking 700 MHz spectrum to supplement their deployed systems will be able to bid only on spectrum they intend to fully use. By allowing licensees to buy only what they can use, rather than forcing licensees to buy more spectrum than necessary, the Commission will help ensure that valuable, “beachfront” 700 MHz spectrum does not lie fallow and is dedicated to its highest and best use.

Third, adopting smaller, ten-megahertz license blocks in the Upper 700 MHz band will allow greater participation by carriers both large and small without precluding bidding by participants interested in acquiring a larger spectrum position. Bidders that seek to acquire twenty megahertz can bid on both ten-megahertz wide 700 MHz blocks. The results of the AWS auction suggest that bidders can, in fact, manage the aggregation risk associated with smaller spectrum blocks and still acquire very large contiguous spectrum positions.⁷ By comparison, retaining a large, twenty megahertz or greater license block would prevent many bidders from realizing the value that they perceive in smaller license blocks and would have no alternative but

⁵ *Ex Parte* letter filed by Glenn S. Rabin, Esq., Alltel Corporation, *et al.*, WT Docket No. 06-150, at 2 (Apr. 18, 2007).

⁶ *Ex Parte* letter filed by Cellular South Licenses, Inc., WT Docket No. 06-150 *et al.* at 3 (Apr. 23, 2007).

⁷ *See, e.g.*, Comments of Metro PCS Communications, Inc., WT Docket No. 06-150, 5-6 (filed Sept. 29, 2006).

the uncertain possibility of obtaining disaggregated sub-blocks in the secondary market. Finally, establishing paired, ten-megahertz license blocks offers the Commission greater flexibility to set aside commercial spectrum in the 700 MHz for the establishment of a public-private partnership, should it choose to do so, without compromising access to commercial spectrum. In the right circumstances, a public-private partnership could harness commercial economies of scale and technological advancements for the benefit of public safety. If the Commission were to allocate 700 MHz spectrum for a public-private partnership while retaining the twenty-megahertz spectrum block, however, then those entrants who seek access to Upper 700 MHz Band spectrum but do not want to participate in a public-private partnership would have no other spectrum from which to choose in the Upper 700 MHz band. Left only with the choice of bidding on the large, twenty megahertz block, many new entrants and incumbent wireless operators unaffiliated with the two dominant ILECs might prove unwilling or unable to participate in the bidding for this license.

III. ADOPTING SMALLER GEOGRAPHIC LICENSING AREAS IN THE UPPER 700 MHZ BAND WILL ENCOURAGE RAPID DEPLOYMENT OF NEW AND INNOVATIVE TECHNOLOGIES AMONG BOTH SMALL AND LARGE COMPETITORS.

To ensure competitive entry and promote the rapid deployment of wireless broadband throughout the country, the Commission should license the two, ten-megahertz blocks created from the single, twenty megahertz block on a Cellular Market Area (CMA) basis. The Commission's general approach in licensing spectrum is to attempt to match the size of the initial geographic license area to the business plans of the initial licensees.⁸ In the 700 MHz band, not all carriers need spectrum over a large geographic area. Capacity requirements differ throughout the country. Some operators offer service only to a small region of the country. And

⁸ *Service Rules for Advanced Wireless Services in the 1915-1920 MHz, 1995-2000 MHz 2020-2025 MHz and 2175-2180 MHz Bands, Notice of Proposed Rulemaking*, 19 FCC Rcd. 19263, ¶ 22 (2004).

other operators may only need to supplement their existing spectrum holdings. Smaller geographic licensing areas permit multiple carriers of varying sizes to enter the market, express the value that they perceive in the spectrum through competitive bidding, and then deploy service rapidly without having to acquire or disgorge spectrum on the secondary market. As one commenter observed earlier in this proceeding, “[o]nly by starting with reasonably small building blocks can bidders have the flexibility to configure the set of licenses that best meets their needs.”⁹

Just as offering a single, twenty-megahertz license would discourage competitive entry into the 700 MHz band, offering only six geographic license areas across the continental United States would prevent many bidders from realizing the value that they perceive in the 700 MHz band.¹⁰ Bidders interested in smaller geographic licensing areas could not acquire access to the geographic area that interests them without first convincing the large geographic license winner to partition their spectrum and then, if the auction winner is willing to sell, incurring the often quite substantial transaction costs associated with obtaining access to a discrete portion of the auction winner’s holdings. While it is conceivable that these carriers could bid on a larger geographic service area license and then sell off unneeded spectrum in secondary markets, this approach adds transactions costs, creates financial uncertainty, creates disincentives for competitors to invest, and is likely to delay deployment of broadband services to the public.

Finally, despite what the two dominant ILEC-affiliated wireless carriers might claim,

⁹ See Analysis Group, *Economics of License Sizes in the FCC’s 700 MHz Band Auction* (Jan. 8, 2007), appearing in Letter from Michele C. Farquhar to Marlene H. Dortch, WT Docket 06-150 (Jan. 10, 2007), available at http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6518717365.

¹⁰ While twelve Regional Economic Area Groupings (REAGs) cover the United States, just six REAGs cover the continental United States. The other six are reserved for Alaska, Hawaii, Puerto Rico, and other areas.

economies of scale and scope do not depend on large geographic areas alone.¹¹ Technologies such as WiMAX offer tremendous cost advantages from a low-complexity design and all-Internet Protocol foundation even if the underlying geographic spectrum licensing areas are small. Moreover, the widespread domestic and global adoption of the WiMAX standard helps encourage economies of scale that permit multiple operators to flourish using a common platform.¹² Given the nascent state of 700 MHz development, adopting the largest possible geographic area for the 700 MHz band spectrum blocks does not serve the public interest. The Commission should instead promote a variety of competitive new entrants, any one of which might emerge as a cost, service, and technology leader, through establishing smaller geographic licensing areas. Adopting smaller geographic licensing areas in the 700 MHz in general – and in the two, new ten-megahertz blocks in the Upper 700 MHz band in particular – will help realize the 700 MHz band’s potential as an incubator for the rapid deployment of new and innovative broadband technologies.

IV. PUBLIC PRIVATE PARTNERSHIPS CAN ENHANCE THE ACCESS OF PUBLIC SAFETY USERS TO BROADBAND TECHNOLOGIES, BUT SECTION 337 OF THE ACT AND FEDERAL-STATE JURISDICTIONAL DIVISIONS POSE LEGAL OBSTACLES THAT THE COMMISSION MUST ADDRESS.

Sprint Nextel supports public-private partnerships to help public safety agencies meet their broadband communications needs in an efficient, effective way.¹³ In the *Further Notice*, the Commission seeks comment on “encourag[ing] public-private partnerships for sharing spectrum between public safety users and commercial licensees in the 700 MHz band,” including

¹¹ Indeed, one of the single largest expenses for Sprint Nextel and other “third pipe” competitive wireless providers is the exorbitant price of leasing special access lines from the dominant ILECs at prices that bear no relationship to cost. *See, e.g.*, Comments of Sprint Nextel Corporation, GN Docket No. 07-45 (filed May 16, 2007) (“By unnecessarily maintaining high special access prices, AT&T and Verizon harm consumers . . . [and] increase the costs of providing broadband services”).

¹² Other technologies aspire to the same economies of scale and scope as WiMAX and are similarly divorced from the geographic areas over which the Commission originally licensed the spectrum.

¹³ Comments of Sprint Nextel, PS Docket No. 06-229, at 5-6 (filed Feb. 26, 2007).

a proposal by Frontline Wireless, LLC.¹⁴ Existing public-private cooperative efforts demonstrate the benefits of public-private partnerships. For example, Sprint Nextel’s Emergency Response Team has worked side by side with first responders across the country to help provide them quick, effective communications capabilities during emergencies.¹⁵ In this way, public-private partnerships can enable public safety agencies to take advantage of commercial, off-the-shelf technology and otherwise benefit from commercial carriers’ investments in research and development of advanced wireless technologies.

To implement public-private partnerships in the 700 MHz band, the Commission must examine whether and how proposals to allow secondary, commercial use of public safety spectrum comport with section 337 of the Communications Act. Section 337(a)(1) requires that 24 MHz of the Upper 700 MHz band be allocated for “public safety services.”¹⁶ Section 337(f) defines “public safety services” as follows:

The term “public safety services” means services –

(A) the sole or principal purpose of which is to protect the safety of life, health, or property;

(B) that are provided –

(i) by State or local government entities; or

(ii) by nongovernmental organizations that are authorized by a governmental entity whose primary mission is the provision of such services; and

(C) that are not made commercially available to the public by the provider.¹⁷

Several parties have expressed concern that section 337(a) and (f) would prohibit a commercial operator from using 700 MHz public safety spectrum, even on a secondary basis, pursuant to a lease agreement or other arrangement with 700 MHz public safety licensees.¹⁸ Sprint Nextel

¹⁴ 700 MHz Further Notice at ¶ 277.

¹⁵ *Id.* at 6.

¹⁶ 47 U.S.C. § 337(a)(1).

¹⁷ *Id.* § 337(f).

¹⁸ See Letter from Steve Largent, CTIA – The Wireless Association, to Chairman Martin, at 2-3, WT Docket No. 06-150 (filed April 5, 2007); Comments of Association of Public-Safety Communications Officials – International, Inc., WT Docket No. 00-230, at 2-3 (filed Dec. 5, 2003).

shares their concerns.

In the *Ninth Notice of Proposed Rulemaking* in PS Docket No. 06-229, the Commission sought comment on allocating the 700 MHz public safety broadband spectrum in a manner that would permit secondary, commercial use. Under this proposal, the Commission would establish (1) a primary allocation for a public safety licensee to provide public safety services; and (2) a secondary allocation for a public safety licensee for leasing on a secondary basis to commercial operators.¹⁹ The Commission stated that “we consider [this] proposal to comport with all statutory requirements,” but invited comment on whether the proposal “is generally consistent with section 337.”²⁰

Although a number of parties supported the Commission’s proposals in the *Ninth Notice*,²¹ the comments in that proceeding shed little or no light on the section 337 issues. The *Ninth Notice* proposed a primary/secondary allocation that may provide a sound legal basis for permitting secondary, commercial use of 700 MHz public safety spectrum consistent with section 337. The Commission, however, should more fully analyze these issues to ensure that 700 MHz band public-private partnerships rest on firm legal footing.²²

Several questions remain about whether the proposed primary/secondary framework satisfies section 337. First, given that the statutory proscription against the “commercial availability” of public safety spectrum fails to distinguish between primary and secondary uses, how does making spectrum available to commercial entities available on a secondary basis represent a meaningful distinction from offering the same commercial services to the public on a

¹⁹ *Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band*, Ninth Notice of Proposed Rulemaking, 21 FCC Rcd. 14837, ¶ 46 (2006) (*Ninth NPRM*).

²⁰ *Id.*

²¹ See, e.g., Comments of the High Tech DTV Coalition (filed Feb. 26, 2007).

²² The Commission would also need to adopt its prior proposal to amend its secondary market spectrum leasing rules to permit 700 MHz band public safety licensees to enter into spectrum leasing arrangements with commercial entities. *Ninth Notice of Proposed Rulemaking* at ¶ 44.

primary basis? Second, if the leasing entity spends the majority of its time and capital on commercial leasing, can the “primary mission” of the leasing entity remain the provision of “public safety services” to protect “life, health, and property” as the Act requires? Third, if the secondary public safety licensee leases spectrum to commercial entities for profit, then is the “sole or principal purpose” of the 700 MHz public safety spectrum, in fact, “to protect . . . safety of life, health, or property”? Stated differently, if the commercial operators have access to most of the 700 MHz spectrum most of the time, then is the semantic division of the band into primary uses for a public safety licensee and secondary use for commercial lessees sufficient to meet the requirement that the “sole or principal purpose” of the public safety spectrum is to protect “life, health, or property”? While these statutory limitations are far from insurmountable, they merit far greater scrutiny in the record than they have received thus far.²³

Similar potential obstacles to interoperability exist in the statutory division between Federal Government uses on the one hand and state and local government uses on the other. Federal and non-federal spectrum users operate on distinct frequency allocations, with the National Telecommunications and Information Administration regulating Federal uses and the Commission regulating non-Federal uses.²⁴ Consistent with section 337’s directive that the 700 MHz spectrum be allocated for non-federal government use (including commercial services and state and local public safety services), the Commission has found that it may not assign 700 MHz licenses to federal entities.²⁵ The Commission has elsewhere permitted state and local public safety licensees to enter into interoperability or shared-used agreements that allow federal

²³ Further, does secondary status on an allocation basis provide sufficiently reliable spectrum access for commercial entities to invest billions of dollars in advanced wireless services?

²⁴ See 47 U.S.C. § 305.

²⁵ *Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communication Requirements Through the Year 2010*, First Report and Order and Third Notice of Proposed Rulemaking, 14 FCC Rcd. 152, ¶¶ 62, 68 (1998).

entities to use 700 MHz public safety spectrum.²⁶ The Commission has found that these agreements comply with section 337, and has “encourage[d] partnering of FCC-licensed state or local government entities with Federal entities” in the 700 MHz band to promote “interoperability, public safety responsiveness to safety of life and safety of property crises, and spectrum efficiency.”²⁷ The Commission should consider whether and how it can encourage *federal* sharing of 700 MHz frequencies, which are reserved for state and local public safety use.²⁸ The additional certainty afforded by a comprehensive exploration of these issues would prove beneficial to all parties interested in promoting public-private partnerships in the 700 MHz spectrum.

V. CONCLUSION

Adopting final service rules for 700 MHz band has the potential to expand competitive opportunities in the wireless market and help ensure the rapid deployment of wireless broadband to the American public. The Commission can help realize the promise of the 700 MHz band by replacing the single twenty megahertz block with two ten-megahertz blocks comprised of smaller CMAs. Smaller block sizes as well as smaller geographic licensing areas in the 700 MHz band would create more opportunities for new entrants, allow established carriers greater flexibility in supplementing their deployed systems, and afford small and rural businesses greater flexibility in entering the 700 MHz spectrum. Prior to authorizing commercial leasing of public safety

²⁶ *Id.* at ¶¶ 63-69; 47 C.F.R. § 2.103(b).

²⁷ *Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communication Requirements Through the Year 2010*, Second Memorandum Opinion and Order, 15 FCC Rcd. 16844, ¶ 43 (2000).

²⁸ *See FCC Seeks Public Comment on Creation of a Spectrum Sharing Innovation Test-Bed*, Public Notice, FCC 06-77 (released June 8, 2006); *Spectrum Policy for the 21st Century – The President’s Spectrum Policy Initiative: Report 1 Recommendations of the Federal Government Spectrum Task Force (Recommendation 11)* and *Spectrum Policy for the 21st Century – The President’s Spectrum Policy Initiative: Report 2 Recommendations From State and Local Governments and Private Sector Responders (Recommendation 6(b))*, NTIA, U.S. Department of Commerce (June 2004), available at <http://www.ntia.doc.gov/reports.html/>.

spectrum, moreover, the Commission must put to rest questions about the permissibility of commercial leasing under section 337 of the Act and provide greater insight on how the statutory and jurisdictional division between Federal and non-Federal public safety users can be overcome.

Respectfully submitted,

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